

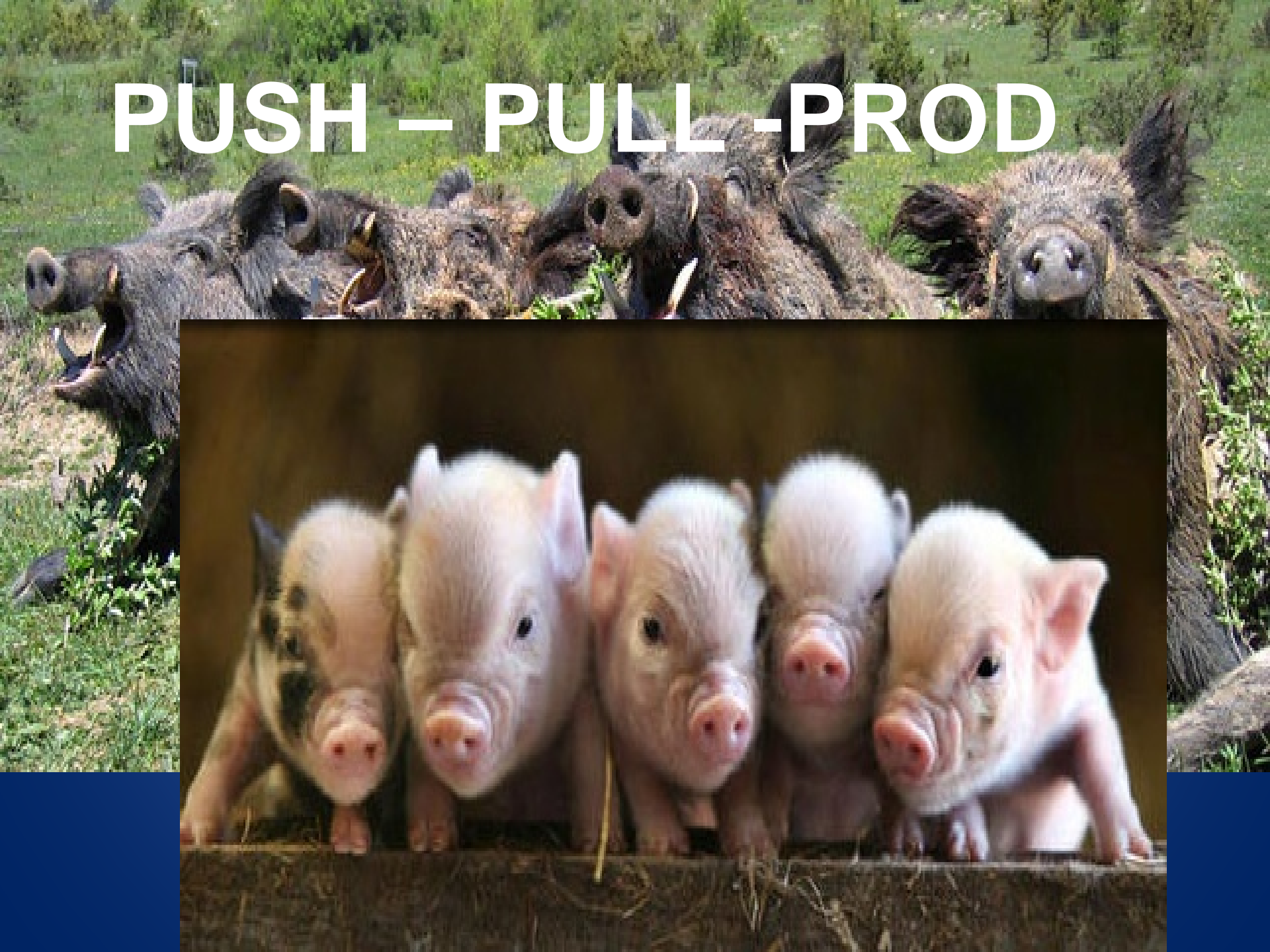


**What is the Appropriate Institutional Organization
for the Administration of Water Policy in Alabama?**

**Alabama Water Resource Conference
7-9 September ,2016**

Mary Wallace Pitts - University of Alabama

PUSH – PULL – PROD



Outline

- Introduction
- Abstract
- History
- Methodology
- Conclusions

Introduction

- No Comprehensive Water Management Plan
- No State-wide water related crisis – YET!
- So why now???
 - Climatic uncertainly
 - Population density
 - Competing needs

Alabama 2015



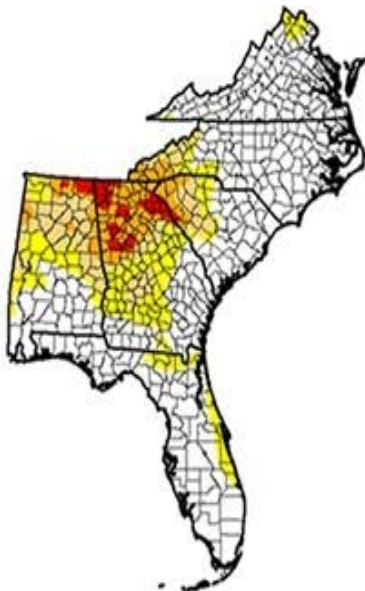
Alabama 2007

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.0	100.0	96.0	91.7	85.5	73.1



U.S. Drought Monitor Southeast



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought

July 26, 2016

(Released Thursday, Jul. 28, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	85.95	34.15	19.37	10.09	2.85	0.00
Last Week (7/19/2016)	88.02	21.98	18.48	10.57	2.85	0.00
3 Months Ago (4/26/16)	89.29	40.72	2.19	0.00	0.00	0.00
Start of Calendar Year (1/1/2016)	95.00	5.00	0.00	0.00	0.00	0.00
Start of Water Year (9/1/2015)	53.44	46.56	11.73	1.74	0.00	0.00
One Year Ago (7/26/15)	57.15	42.85	17.88	2.24	0.24	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

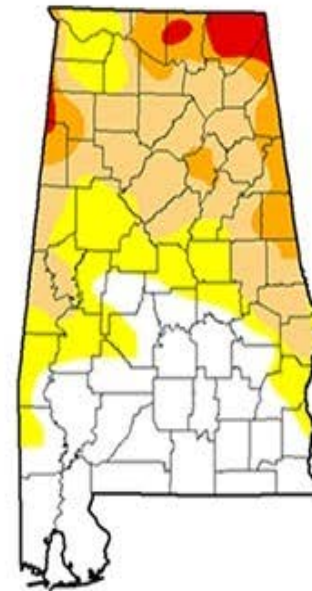
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture



<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor Alabama



July 26, 2016

(Released Thursday, Jul. 28, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	38.09	61.91	48.31	11.95	2.70	0.00
Last Week (7/19/2016)	37.82	62.98	41.53	14.59	2.72	0.00
3 Months Ago (4/26/16)	91.12	8.88	0.00	0.00	0.00	0.00
Start of Calendar Year (1/1/2016)	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year (9/1/2015)	37.12	62.88	4.86	0.00	0.00	0.00
One Year Ago (7/26/15)	58.90	40.10	9.27	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
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The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

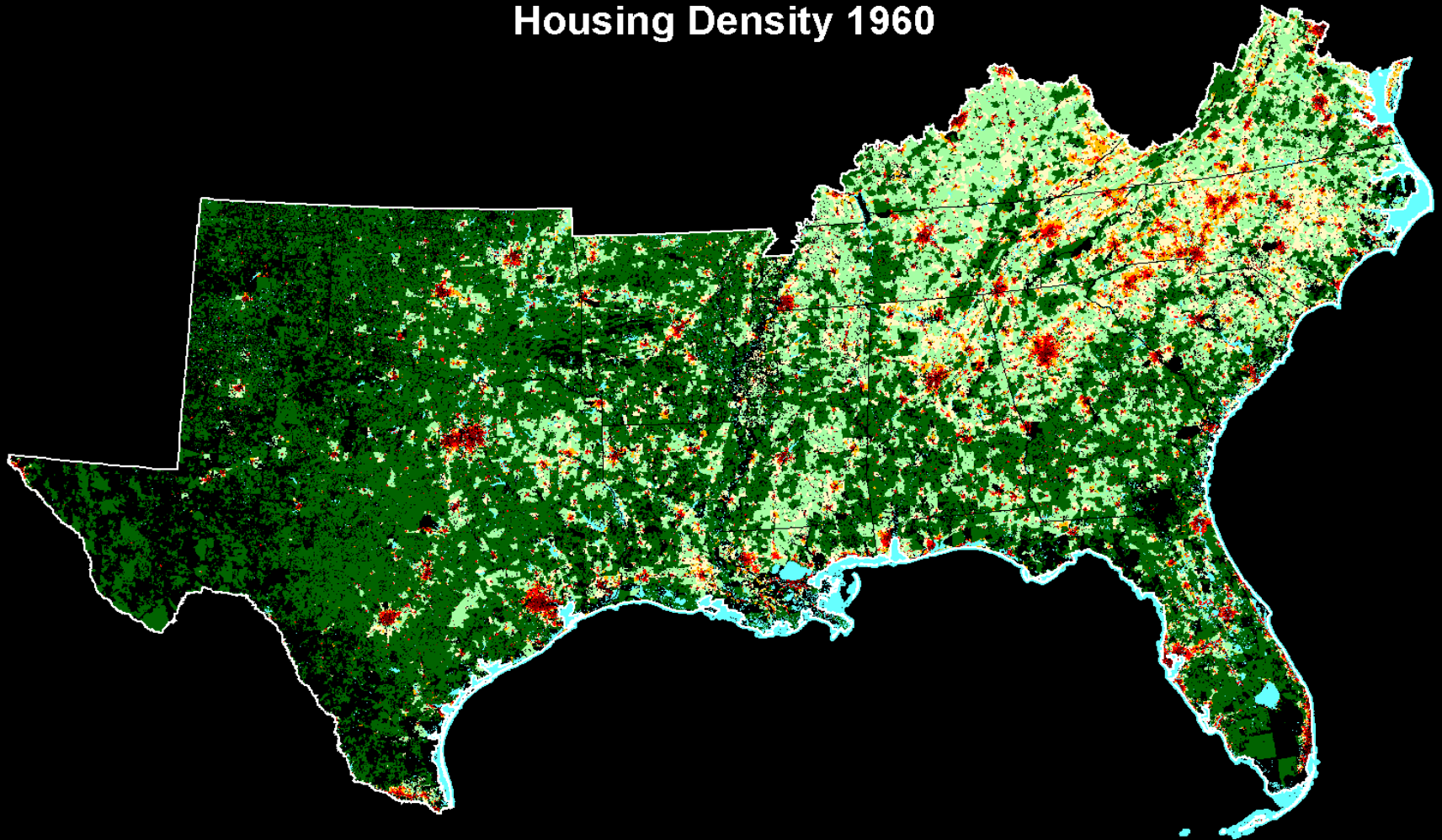
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Southern Region

Housing Density 1960



Housing Units per Km²

0

2 - 4

8 - 16

>128

0 - 2

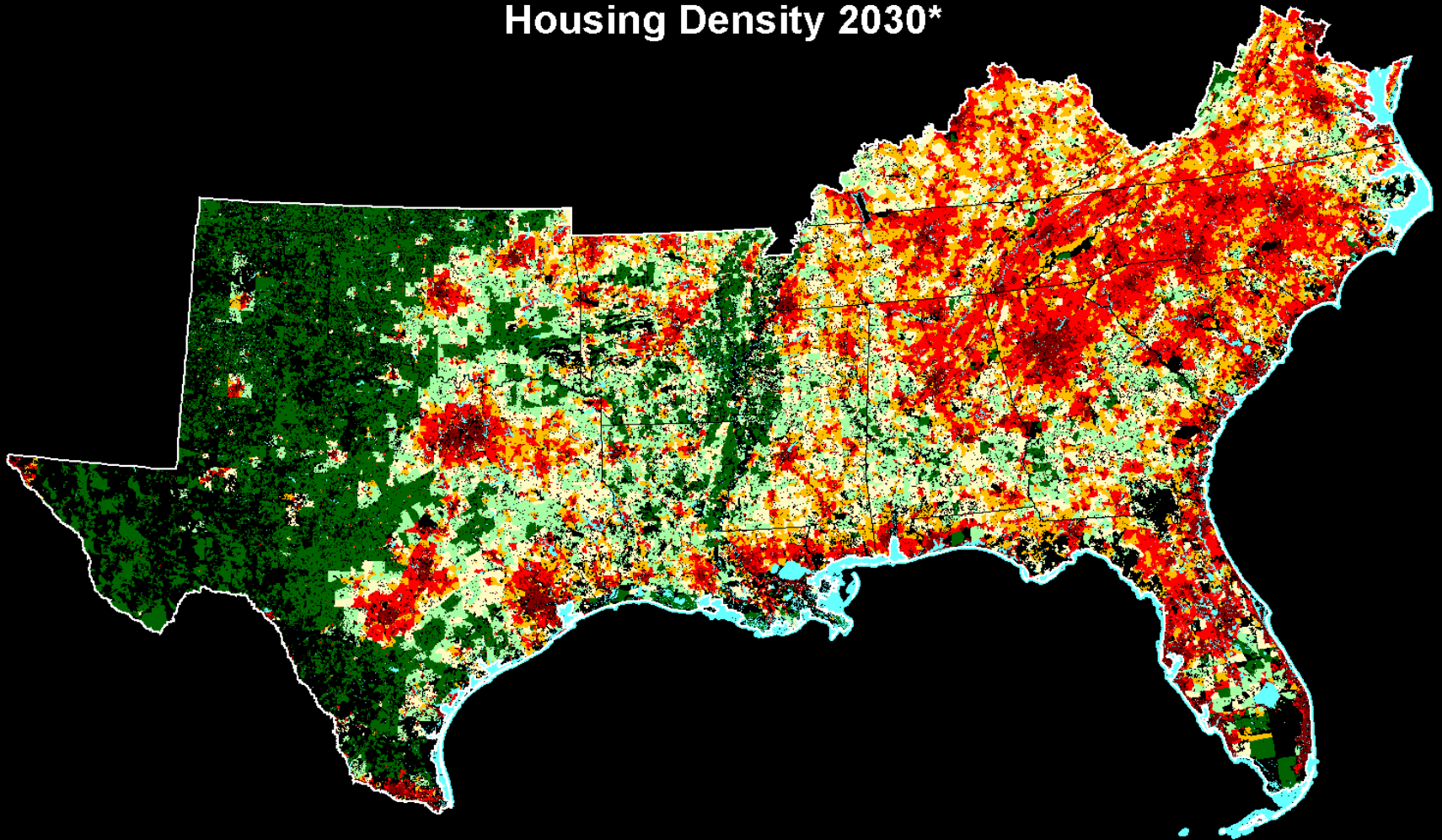
4 - 8

16 - 128

Water

Southern Region

Housing Density 2030*



Housing Units per Km²

*Linear projection of 1990s growth



Competing Needs



Abstract

Questions?????

- Should Alabama use natural watershed boundaries rather than existing political ones to administer our developing water policy?
- Should Alabama consider using existing local governance entities, or components thereof, to implement the developing policy?

Abstract

Data Gap.....

- The Alabama Water Agencies Working Group (AWAWG) has recognized the importance of natural hydrologic boundaries and has recommended that future management should be based, at least in part, on their location. *“Water should be managed in consideration of hydrologic boundaries while recognizing existing political boundaries and legal entities”* (AWAWG, 2014). However, little data exists to inform decision makers with respect to selection of the appropriate local governance entity or entities to implement the water policies being developed for the state.

Abstract

Research Focus

- Review and assess existing national and international water policies
- Evaluate institutional structures employed to implement these policies - emphasis on local governance entities
- Identify successful programs and institutions
- Propose an appropriate institutional framework for Alabama's water policy

History

- 1965 Water Resource Planning Act
- 1982 ADEM assumed regulatory authority for all State and Federal Environmental Statutes and Regulations
- 1989 Alabama Water Resources Study Commission (AWRSC)
- 1990 AWRSC Report “Water for a Quality of Life”
- 1993 Alabama Water Resources Act
- 2008 Permanent Joint Legislative Committee for Water Policy and Management
- 2011 Alabama Water Agencies Working Group (AWAWG)
 - OWR (ADECA), ADEM, GSA, ADCNR, AGI (added in 2012)
- 2012 Water Management Issues in Alabama
- 2013 Mapping the Future of Alabama Water Resources Management: Policy Options and Recommendations

Methodology

- Literature Review
 - State, National, International
- Develop matrix to evaluate programs
- Questionnaires/Interviews in AL
- Assess existing framework in AL
- Propose institutional approach

Georgia

Comprehensive Statewide Water Management Plan 2008

- “Innovative concepts”
 1. Evaluation of Resources
 2. Development regional forecasts of water supply and assimilative capacity demands
 3. Regional water development and conservation plans
 - Regulated riparian legal doctrine
 - All 3 concepts supported by and consistent with GA law

European Union

Water Framework Directive (WFD) 2000

- Framework of legislative action
- Consolidate disparate instruments on water
- Establish coherent water policy
- Three concepts
 - River basin district as organizing/planning unit
 - River basin management plans as tools for planning
 - Consultation/participation with water users and public in river basin management
- “...also to establish institutional mechanism that could guarantee the accomplishment of qualitative goals”
- National and international river basin districts identified
- “shall ensure the appropriate administrative arrangements including the identification of the appropriate competent authority...” for the application of the directive in each basin

Water Policy Future in the EU

- Most states recognize that IWRM is a necessity
- Techniques of coping
- No new institutions have been developed
- Reorientation of existing institutions

Conclusions

- The AWA WG MAP process
- Adaptive Management
 - “learning while doing”
- Transparency
- Collaboration
- Institutional framework developed in conjunction with the policy itself
- Learn from the past – develop robust institutional framework for the future
- “The challenge will be to use the collaborative capacity built up in recent decades to build resilience into the system to ensure sustainability of water resources in the future” US Water Policy: Trends and Future Directions, Adam Reimer 2013



We see Life in and around our watershed

Lake Tuscaloosa

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- Dr. Eve Brantley, Extension Specialist & Associate Professor, Crop, Soil and Environmental Sciences, Auburn University

- Research in furtherance of an Interdisciplinary PhD in Watershed Science, University of Alabama

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